

## Cluster Headache

Cluster Headaches are idiopathic, neurovascular headaches that are characterized by being unilateral in quality, occurring in clusters of time, and often having associated autonomic symptoms. They occur in clusters of attacks separated by periods of remission. These headaches can be aborted with 100% High Flow Oxygen and Sumatriptan, and Verapamil is often used to prevent attacks in patients with chronic or episodic disease.



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### Presentation

#### More Common in Men

##### Male sex-sign

Men are affected approximately four times as often as women.

#### Unilateral Periorbital Headache

##### One-sided Pear beside Eye

The pain of cluster headaches is severe, sudden, and always unilateral. It is distributed in an orbital, supraorbital, or temporal pattern.

#### Ipsilateral Tearing

##### One-sided Tears

Autonomic symptoms occur ipsilaterally, or on one side and only during the active course of the headache. They reflect both hyperactivation of the parasympathetic system, and suppression of the sympathetic system. Symptoms may include lacrimation, conjunctival injection, nasal congestion, rhinorrhea, ptosis, miosis, and diaphoresis.

#### Precipitated by Alcohol

##### Alcoholic-martini

Consumption of alcohol is a well known trigger, with onset of headache often occurring within one hour of use.

#### Stabbing Pain

##### Stabbing Pain-bolt

Cluster headaches are characterized by the sudden onset of severe, stabbing pain on one side of the head.

### Duration

#### 15 min - 3 Hours

##### 15 min to 3 hr Watch

Pain attacks last anywhere from fifteen minutes to three hours when untreated.

## Repetitive Attacks in Clusters

### Repeating Attacks on Clusters

Cluster headaches occur in repetitive pain attack patterns at the same time of day or same season of the year. The disorder has active cluster periods lasting from seven days to one year in which the patient experiences between one and eight headaches per day. These active periods are separated by periods of remission during which they do not experience any pain attacks.

## Treatment

### High Flow 100% O<sub>2</sub>

#### O<sub>2</sub>-tank

Administer 100% Oxygen as a first line treatment via nonrebreather mask at a rate of 12-15 L/min to a seated, upright patient. Pain may subside in as little as five minutes, however the treatment should be continued for a minimum of 15 minutes. You can remember this as 15 L/min for 15 minutes.

### Ergots

#### Eagle

Oral Ergotamine has been used for a long time in the treatment of cluster headaches, however the evidence supporting its use is limited. It may be effective if given very early in the attack, however it is not first line. Additional less common second line treatments include lidocaine and octreotide.

### Sumatriptan

#### Sumo-trip

Triptans are a 5-HT<sub>1B</sub> and 5-HT<sub>1D</sub> receptor agonist medication which cause vasoconstriction in cranial arteries. It is indicated as first line treatment along with oxygen. It can be administered subcutaneously or intranasally, however the subcutaneous route has a faster onset of action. Triptans have several important side effects, including nonischemic chest pain and distal paresthesias, and therefore should be avoided in patients with cardiovascular disease, stroke, uncontrolled hypertension, or pregnancy.